

### **7.3.1 Institutional Distinctiveness: Our Quest for Water Conservation: Rain Water Harvesting and Bore Well Recharge**

**Institutional Distinctiveness:** The Institutional Sensitivity towards Climate Change and Environment Concerns: A Project demonstrating Institutional Distinctiveness: Roof Water Harvesting & Bore Well Recharge Project under Institutional Social Responsibility. The Project is distinct and perhaps unique of its kind in the state of Maharashtra depicting the institution's proactive response to the National Water Mission.

#### **Background and Context:**

Climate change and environmental issues are global concerns impacting local living. Being the leading institution in the region, it has been distinctly portrayed its sensitivity and sensibility towards these issues by adopting environment friendly practices and positive actions in resolving them through energy conservation, green and clean energy, rainwater harvesting, waste management on campus and promoting them in the region as the institutional social responsibility. The college is located in a drought prone northern area of Koregaon tehsil, the region known for scanty rainfall leading to water scarcity and periodical droughts. Due to the lack of assured irrigation facilities, farmers are mostly relied on rainfall and bore well facilities created on their own. As a result, the water table has been gone down upto 300 to 400 ft. More so, most of the bore Wells have run dry in the region. Besides, the region faces severe scarcity of drinking water; the conditions become even acute during summer.

Owing to this, among others, promoting the projects like rainwater harvesting, bore well recharge would certainly improve the water table in the region, thereby providing a sort of reprieve in dealing with the problem of water scarcity prevalent in the region. This will not only help resolve the scarcity of water plaguing the people in the region but also enhance the institute-society connect. The project, being unique and first of its kind the

University jurisdiction occupies eminence and place of pride in the public domain, setting the exemplary pioneering footsteps that the others may have to follow to contribute immensely to the National Water Mission'.

**The Problem:**

The residents of North Koregaon tehsils of Satara district mainly depend on agriculture, dairy, goat rearing, local hens and manual labour for their livelihood. The majority of farming is rain fed, and farmers primarily grow *kharif* and *rabbi* crops. The irrigation sources are percolation tanks. The main reasons for crop failure are insufficient rainfall and the absence of water harvesting structures. This is felt most acutely in the summer season, when all the bore wells run dry. The selected villages (Dahigaon, Deur, and PHCS in Palshi, Wathar (Station) and Pimpode Bk. of the north of Koregaon and Adarki (Kh). in Phaltan tehsil) for this project also lack drinking water during summer.

**The Solution:**

Since the majority of bore wells get dry before March, we planned to recharge them using a reliable technique. This would elevate the water table, thereby improving the availability of water for drinking purposes in the summer season. Our project included recharging of bore wells in Dahigaon, Deur, and PHCs in Palshi, Wathar (Station) and Pimpode Bk. of the north of Koregaon and Adarki (Kh.) in Phaltan tehsil of Satara District.

**Project Partners: Generous contributions from Industries & NGO's:**

The project was financially supported by partner industry Innovative Engineering and Rotary Club of Satara and other Industries besides this project, the college has been working on the solutions of the problems faced by the residents of the region, creating awareness on environmental issues, enlightening and conducting training programs.

### **Objectives of the Project:**

Owing to the situatedness, the institute has identified water conservation as the priority and thrust area in the region. The specific objectives the project is destined to serve are:

1. To conserve water to improve the water table.
2. To minimize the scarcity of drinking water prominently faced in summer.
3. To mitigate the risk of drinking water arising due to water scarcity.
4. To encourage the people to take up initiatives for rainwater harvesting and bore well recharge.
5. To inculcate social and environmental values amongst students.

### **The Pilot Project:**

The college, located in the region, was also facing a severe water scarcity problem especially during the summer. The bore well output was too short to fulfill the water requirement. Hence, the college undertook the bore well recharge as a pilot project with the help of 'Innovative Engineering an enterprising firm manufacturer and exporter in Satara.

Institute evolved and devised a cost-effective, eco-friendly model deploying locally available resources as input / raw material to the extent possible.

Based on the encouraging results, the college decided to implement the project in five villages using reference data with support and people's participation. Preference is given to the public utility bore wells.

### **Model Implemented:**

The self-devised model of Roof Water Harvesting and Bore Well Recharge is implemented with reduced cost by exploring and utilizing locally available resources.

### **Technical aspects, process and procedures:**

1. Identification of the bore well.
2. Marking and lineout of the recharge pit spot.
3. Digging and excavation for the water storage pit (dimensions 5ft x 5ft x 6ft).
4. Refilling the excavated pit with stones. (up to 1.5 feet from the bottom)
5. Making small openings on the casing pipe and wrapping it with a shade net.
6. Refilling the pit filled with stone, crushed stones and sand respectively up to the ground level.
7. Finally, a brick structure to cover the boundaries of the recharge pit preventing waste or used water directly entering the recharge pit.
8. Making a provision for roof-water collection and harvesting it into the pit.

### **The Practice:**

The bore well recharge project was implemented on fields under the initiative and technical guidance of the College and financial support of the Rotary Club of Satara and local bodies. The selection of sites and bore wells was based on a survey conducted with the help of NSS volunteers and the students of the college with a focus on public utility. The average depth of the surveyed bore wells was recorded to be 200-250 feet. Of the identified sites, initially, 10 bore wells were taken for recharging with roof water harvesting.

### **Impact of the Project:**

The project received wide media attention and coverage in both print and electronic media, lauding its uniqueness and distinctiveness that created a kind of recognition and identity of the institute at one end and orientation at the other. The project has attributed to following positive impact:

1. Positive feedback from bore well recharge beneficiaries.

2. The bore wells running dry from February, are outputting the water throughout the year including summer.
3. The bore well recharge project helped to overcome the drinking water shortage faced in summer.
4. This Project inculcates social and environmental values amongst students, teachers & people.

The institution thus exhibited its distinctiveness in providing the solution to the long-existing problem ever faced by the people in the region, under the Institutional Social Responsibility, thereby consolidating Institute-Society connect.